Specifications

Eaton 119890



Catalog Number: 119890

Eaton Moeller series NZM - Molded Case Circuit Breaker. Switch-disconnector 4p 800A 1000VDC

General specifications

Product Name
Eaton Moeller series NZM switch-disconnector

Catalog Number
119890

EAN
4015081177387

Product Length/Depth
401 mm

Product Height
207 mm

Product Width
280 mm

Product Weight
22.723 kg

Compliances
RoHS conform

Certifications
IEC

Powering Business Worldwide

Product specifications

Type

DC switch-disconnector Switch-disconnector

Special features

IEC/EN 60947-3 CCC China Compulsory Certificate Main switch characteristics including positive drive to IEC/EN 60204 and VDE 0113. Isolating characteristics to IEC/EN 60947-3 and VDE 0660. N switch-disconnectors can be combined with NZM...-XU, NZM...-XA shunt releases and auxiliary contacts as well as with NZM...-XR... remote operator. For DC switching, all 4 contacts must be connected in series. Refer to the information on jumper kit accessories. Supplied as standard: Screw connection box terminal optional. When working with ungrounded systems (e.g., IT), the installation must ensure that a double ground fault will be impossible. Switch can not be combined with plug-in/withdrawable units and/or connection on rear. N4-4-...-S15-DC feeder unit and outgoer from the bottom only. Lifespan, mechanical: of which max. 50 % trip by shunt/undervoltage release Rated current = rated uninterrupted current: 800 A Values for rated uninterrupted current at 65 °C include jumpers.

Application

Open areas Utility buildings

Amperage Rating

800 A

Voltage rating

1000 V - 1000 V

Circuit breaker frame type

N4

Features

Motor drive optional
Version as main switch
Version as emergency stop installation
Remote operation with shunt releases / remote operator
Version as maintenance-/service switch

10.10 Temperature rise

The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.

10.11 Short-circuit rating

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

Resources

Brochures

eaton-digital-nzm-brochure-br013003en-en-us.pdf

eaton-feerum-the-whole-grain-solution-success-story-en-us.pdf

Catalogs

eaton-digital-nzm-catalog-ca013003en-en-us.pdf

Declarations of conformity

DA-DC-03_N4

Drawings

eaton-circuit-breaker-nzm-switch-disconnector-dimensions.eps

eaton-circuit-breaker-nzm-switch-disconnector-3d-drawing-002.eps

eaton-circuit-breaker-terminals-nzm-switch-disconnector-3d-drawing-003.eps

eaton-circuit-breaker-terminals-nzm-switch-disconnector-3d-drawing-002.eps

eaton-circuit-breaker-cable-nzm-mccb-3d-drawing-004.eps

eaton-circuit-breaker-nzm-switch-disconnector-3d-drawing-003.eps

eaton-circuit-breaker-nzm-switch-disconnector-3d-drawing.eps

eaton-circuit-breaker-terminals-nzm-switch-disconnector-3d-drawing.eps

eCAD model

DA-CE-ETN.N4-4-800-S1-DC

Installation videos

The new digital NZM Range

Introduction of the new digital circuit breaker NZM

mCAD model

DA-CS-nzm4_4p

DA-CD-nzm4_4p

Technical data sheets

eaton-nzm-technical-information-sheet

10.12 Electromagnetic compatibility

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

10.13 Mechanical function

The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

10.2.2 Corrosion resistance

Meets the product standard's requirements.

10.2.3.1 Verification of thermal stability of enclosures

Meets the product standard's requirements.

10.2.3.2 Verification of resistance of insulating materials to normal heat

Meets the product standard's requirements.

10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects

Meets the product standard's requirements.

10.2.4 Resistance to ultra-violet (UV) radiation

Meets the product standard's requirements.

10.2.5 Lifting

Does not apply, since the entire switchgear needs to be evaluated.

10.2.6 Mechanical impact

Does not apply, since the entire switchgear needs to be evaluated.

10.2.7 Inscriptions

Meets the product standard's requirements.

10.3 Degree of protection of assemblies

Does not apply, since the entire switchgear needs to be evaluated.

10.4 Clearances and creepage distances

Meets the product standard's requirements.

10.5 Protection against electric shock

Does not apply, since the entire switchgear needs to be evaluated.

10.6 Incorporation of switching devices and components

Does not apply, since the entire switchgear needs to be evaluated.

10.7 Internal electrical circuits and connections

Is the panel builder's responsibility.

10.8 Connections for external conductors

Is the panel builder's responsibility.

10.9.2 Power-frequency electric strength

Is the panel builder's responsibility.

10.9.3 Impulse withstand voltage

Is the panel builder's responsibility.

10.9.4 Testing of enclosures made of insulating material

Is the panel builder's responsibility.

Pollution degree

3

Mounting Method

Built-in device fixed built-in technique

Fixed

Distribution board installation

Ground mounting

Intermediate mounting

Equipment heat dissipation, current-dependent

95 W

Utilization category

DC-22 A

Rated short-time withstand current (Icw)

34 kA

Degree of protection

IP20

Electrical connection type of main circuit

Screw connection

Ambient operating temperature - max

70 °C

Ambient operating temperature - min

-25 °C

Ambient storage temperature - max

70 °C

Ambient storage temperature - min

40 °C

Current rating (Iu) at 40°C with terminal jumpers

800 A

Current rating (Iu) at 65°C with terminal jumpers

800 A

Number of auxiliary contacts (change-over contacts)

0

Number of auxiliary contacts (normally closed contacts)

0

Number of auxiliary contacts (normally open contacts)

0

Rated insulation voltage (Ui)

1250 V

Rated operating power at AC-23, 400 V

0 kW

Rated operating power at AC-3, 400 V

0 kW

Switch positions

I, +, 0

Lifespan, mechanical

10000 operations

Overvoltage category

III

Rated operational current

1400 CSA (DC-21B)
800 A (DC 22-A)

Degree of protection (IP), front side

IP20

Number of poles

Four-pole

Terminal capacity (copper strip)

Max. 10 segments of 32 mm x 1 mm (2x) at flat conductor terminal
Min. 6 segments of 16 mm x 0.8 mm at flat conductor terminal
10 segments of 50 mm x 1 mm (2x) at 1-hole module plate
Max. 10 segments of 50 mm x 1 mm (2x) at rear-side connection (punched)
Min. 10 segments of 50 mm x 1 mm (2x) at rear-side connection (punched)
10 segments of 80 mm x 1 mm (2x) at rear-side width extension

Handle color

Black

Functions

Interlockable

Voltage release optional

Disconnectors/main switches

Photovoltaic applications

Number of switches

1

Rated conditional short-circuit current (Iq)

0 kA

Rated operating voltage (Ue) at AC - max

0 V

Rated operational current for specified heat dissipation (In)

800 A

Rated permanent current at AC-21, 400 V

0 A

Rated permanent current at AC-23, 400 V

0 A

Rated short-time withstand current (t = 0.1 s)

34 kA

Switching power at 400 V

0 kW

Handle type

Rocker lever

Number of operations per hour - max

60

Standard terminals

Screw terminal

Terminal capacity (copper busbar)

Min. 25 mm x 5 mm direct at switch rear-side connection

Min. 60 mm x 10 mm at rear-side width extension

Max. 50 mm x 10 mm (2x) at rear-side 1-hole module plate

M10 at rear-side screw connection

Max. 50 mm x 10 mm (2x) direct at switch rear-side connection

50 mm x 10 mm (2x) at rear-side 2-hole module plate

Max. 80 mm x 10 mm (2x) direct at switch rear-side connection

Max. 10 mm x 80 mm (2x) at rear-side width extension

Min. 25 mm x 5 mm at rear-side 1-hole module plate

Terminal capacity (copper solid conductor/cable)

300 mm² (4x) at rear-side width extension

35 mm² - 185 mm² (4x) at rear-side 2-hole module plate

95 mm² - 300 mm² (2x) at rear-side 1-hole module plate

95 mm² - 240 mm² (6x) at rear-side width extension

95 mm² - 185 mm² (2x) at rear-side 2-hole module plate

50 mm² - 240 mm² (4x) at 4-hole tunnel terminal

120 mm² - 300 mm² (1x) at rear-side 1-hole module plate

Terminal capacity (copper stranded conductor/cable)

50 mm² - 185 mm² (4x) direct at switch rear-side connection

120 mm² - 185 mm² (1x) direct at switch rear-side connection

50 mm² - 240 mm² (1x) at 2-hole tunnel terminal

50 mm² - 240 mm² (2x) at 2-hole tunnel terminal

Terminal capacity (aluminum stranded conductor/cable)

25 mm² - 240 mm² (4x) at 4-hole tunnel terminal

Eaton Corporation plc
Eaton House
30 Pembroke Road
Dublin 4, Ireland
Eaton.com

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